

The Genus *Polynemoidea* Girault

(Hymenoptera: Mymaridae)

RICHARD L. DOUTT¹

University of California, Berkeley

The finding of a fossil species of *Polynemoidea* in Oligocene amber from Chiapas, Mexico, and the recognition of a synonymous genus from Tasmania has motivated this synopsis.

POLYNEMOIDEA Girault

Polynemoidea Girault, A. A. 1913. Mem. Queensland Mus., 2: 116.

Selenaesus Waterhouse, C. O. 1914. Trans. Entomol. Soc. London, 1914 pp. 536–537. (*New synonymy*).

Type of genus: *Polynemoidea varicornis* Girault

Polynemoidea varicornis Girault, A. A. 1913. Mem. Queensland Mus., 2: 116.

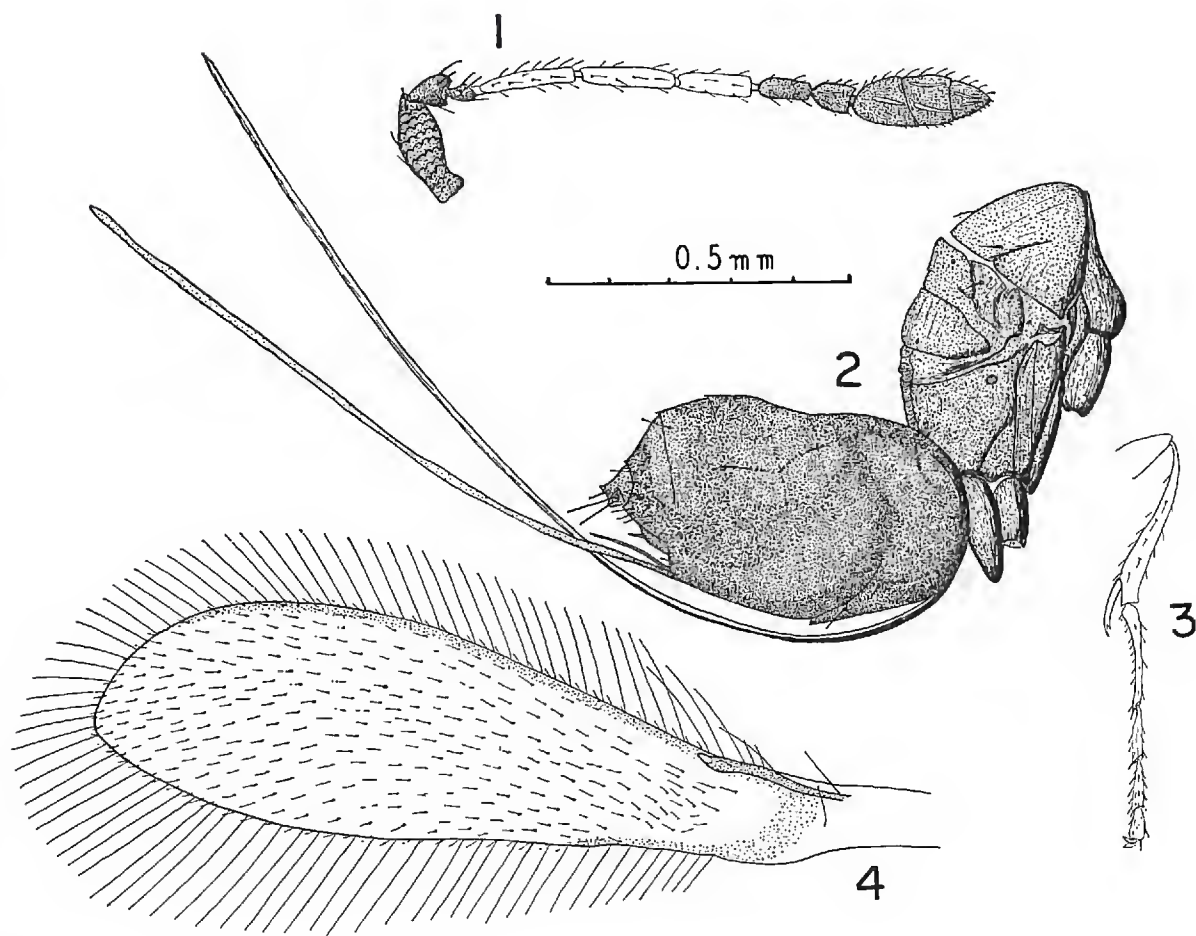
Selenaesus turneri Waterhouse, C. O. 1914. Trans. Entomol. Soc. London, 1914, p. 537. (*New synonymy*).

The type species, *P. varicornis* Girault, was described from a female collected at Hobart, Tasmania. I have not seen this specimen which is reportedly in the South Australian Museum at Adelaide under type number I. 1228. However, I have examined two female specimens in the Girault collection at the Queensland Museum, Brisbane. These are together on one slide. The labels are in Girault's handwriting and one reads "*Polynemoidea varicornis* Girault ♀ Cotype." The word "Type" is above the word "Cotype" but is crossed out. The other label reads "Bred from wood. Hobart, Tas. H. W. Lea." Since a type was designated it is highly probable that these two female specimens are paratypes. They are from the same locality (Tasmania) as the type and certainly fit the original description.

The species *P. varicornis* is very distinct from the other members of the genus in several respects. The scape is serrated; funicle segments 2, 3 and 4 are remarkably elongate and much lighter in color than other antennal segments (Fig. 1). The ovipositor is greatly exserted (Fig. 2). The first tarsal segment is especially long (Fig. 3), and the forewings tend to be pointed (Fig. 4). In body size it is the largest species in the genus.

It is interesting that a single mymarid female also collected in Tasmania was described as *Selenaesus turneri* Waterhouse. This specimen

¹ Present address: 9240 S. Riverbend Avenue, Parlier, California 93648.



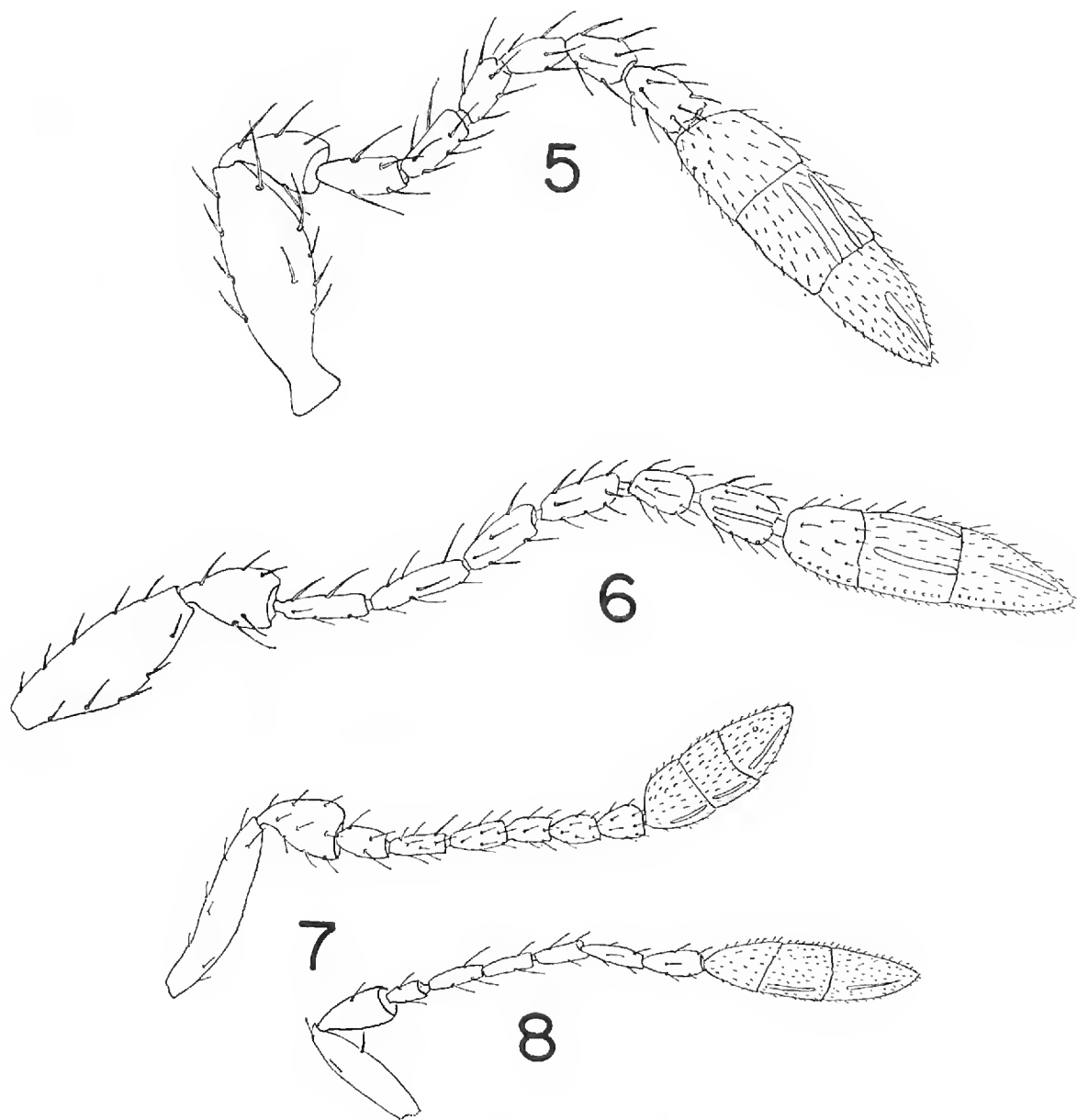
FIGS. 1-4. *Polynemoidea varicornis*. FIG. 1. Antenna. FIG. 2. Body proportions. FIG. 3. Fore tibia and tarsi. FIG. 4. Forewing.

is in the British Museum (Natural History), London, and is identical with *P. varicornis* Girault. This synonymous species was thought by the collector to be associated with some homopterous galls, but there is so far no definite host relationship established for any species in the genus *Polynemoidea*.

POLYNEMOIDEA LINCOLNI Girault

Polynemoidea lincolni Girault, A. A. 1913. Mem. Queensland Mus. 2: 116-117.

The type specimen is a single female collected by sweeping jungle vegetation, Nelson (Cairns) Queensland, July 10, 1913 (A. P. Dodd). The original description is accurate except that all the funicle segments are dark and segments 1 and 2 are subequal (Fig. 5). The ovipositor originates at the base of the abdomen and is slightly exserted. The wings are broad (Fig. 9). The thorax is without sculpturing and the dark brown or black mesoscutum strikingly contrasts with the yellow scutellum and propodeum. The eyes and head are black. The mandibles have two teeth and a blunt truncation.

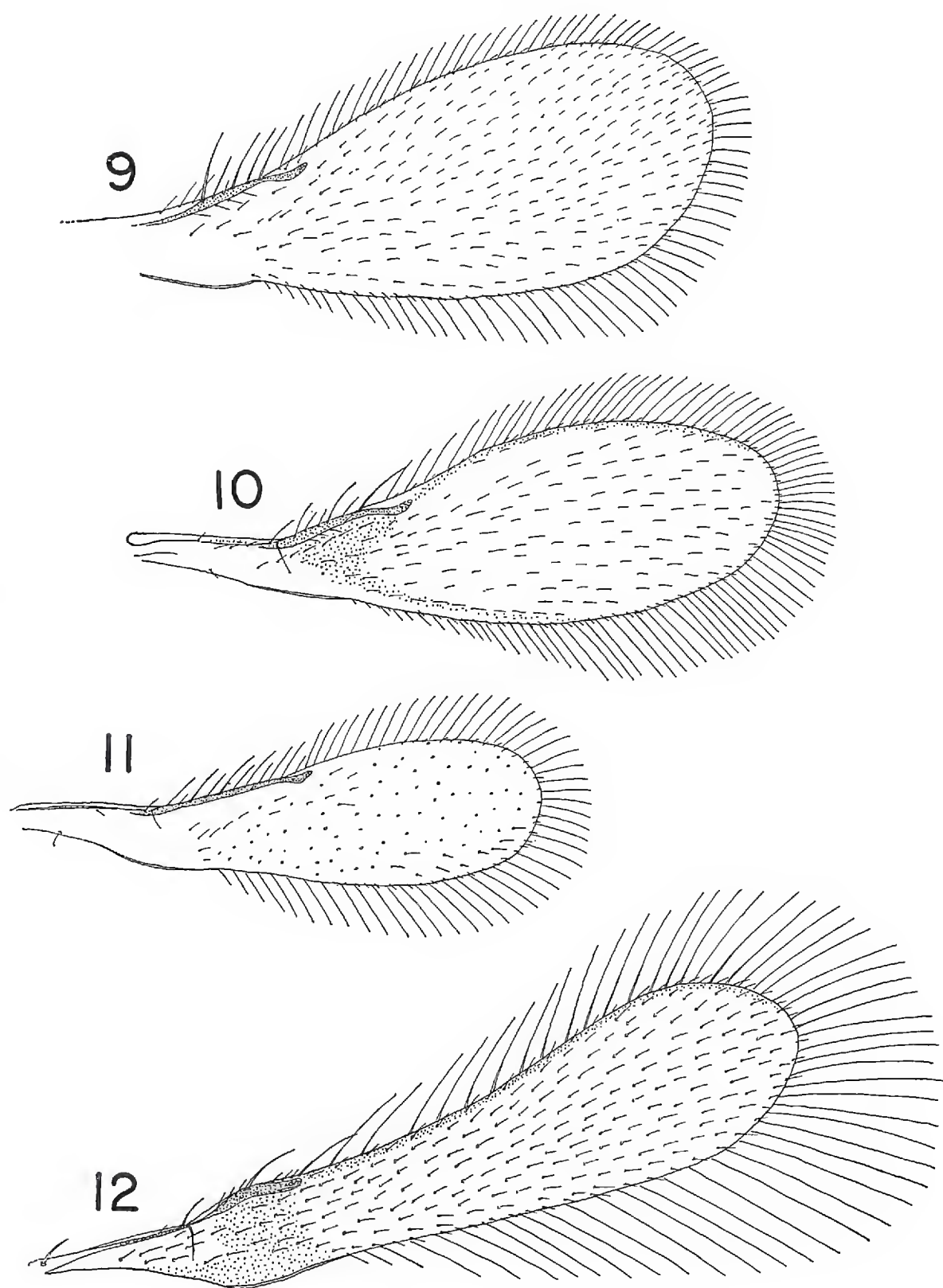


FIGS. 5-8. Antennae. FIG. 5. *Polynemoidea lincolni*. FIG. 6. *P. particoxae*. FIG. 7. *P. domestica*. FIG. 8. *P. mexicana*.

POLYNEMOIDEA PARTICOXAE Girault

Polynemoidea particoxae Girault, A. A. 1938. Rev. Entomol. (Rio de Janeiro), 9: 390-391.

This species is related to *P. lincolni* but funicle segments 1 and 2 are somewhat more slender (Fig. 6) and the forewing is narrower (Fig. 10). The head is black, eyes purplish black. The mandibles have 3 distinct teeth. The scutum and scutellum are black, the propodeum is yellow. The forecoxae are dark but the middle and hind pairs are light, trochanters pale, femora dark, tibia and tarsi light. The abdomen is short, dark; the ovipositor originates at base of abdomen and is only slightly exerted. Both *P. lincolni* (Fig. 9) and *P. particoxae* (Fig. 10) have forewings with long, slender marginal and stigmal veins.



FIGS. 9-12. Forewings. FIG. 9. *Polynemoidea lincolni*. FIG. 10. *P. particoxae*. FIG. 11. *P. incerta*. FIG. 12. *P. domestica*.

POLYNEMOIDEA INCERTA Girault

Polynemoidea incerta Girault, A. A. 1938. Rev. Entomol., Rio de Janeiro, 9: 391.

The type specimen is a fragmented male. The antennal clubs are missing. There are eleven flagellar segments present on one antenna. The marginal vein is extraordinarily long for this genus (Fig. 11). This single male is doubtfully retained in this genus although it does belong in the Tribe Anaphini.

POLYNEMOIDEA DOMESTICA Girault

Polynemoidea domestica Girault, A. A. 1931. A new habit in an old insect, *Homo pudicus* and new Eurytomidae. Privately published, Brisbane, Australia, 4 pp. (p. 3).

The type specimen is a single fragmented female collected on a window of Girault's home, Indooroopilly, Queensland, 1929. The body is dark brown, legs lighter brown. Eyes crimson. Antenna as in Fig. 7, scape slender. Scutum with distinct reticulate sculpturing. Wings with short marginal and stigmal veins (Fig. 12).

***Polynemoidea mexicana* Doult, new species**

FEMALE.—Body, viewed laterally, compressed, hypogynium absent. Thorax elongate, about equal to abdomen. Color golden brown. Head with very short dimension on anterior-posterior axis, but very long dimension on dorsal-ventral axis. Antennae as in Fig. 8. Scape moderate length, normal; pedicel somewhat enlarged, elongate. Six funicle segments, first is smallest, increasing in width distally. Club distinctly 3-segmented, long. One antenna with segments somewhat compressed (possibly artifact of fossilization process). Legs normal, wing characteristics mostly hidden by bubbles and fractures in amber block, but discal ciliation similar to *P. domestica*. Ovipositor exerted but not remarkably so, thus similar to *P. domestica*, but with different antennal characters.

Holotype female, LAS CRUCES LANDSLIDE, CHIAPAS, MEXICO.

Described from single female embedded in amber. This specimen is at the University of California Museum of Paleontology and has the type number 12865, loc. B-5104 (1957). The B-5104 amber is from the Las Cruces landslide, Chiapas, Mexico. This locality is about 23 km (airline) east-southeast of the town of Simojovel, about 6.8 km south-east of the headquarters of the Rancho Santo Domingo, about 1.4 km northwest of Rancho San José de Buenavista. The landslide is on the south slope, near the southeast end of the major ridge known locally as Nichcalan (also as Cerro Balumtun). The amber was found in a dense blue limestone near the base of the slide. The marine invertebrate fauna from adjacent beds indicates an age in the range from late Oli-

gocene to early Miocene. (This locality description from Fennah, R. G. 1963. U. C. Publ. Entomol. 31(1): 45.)

KEY TO FEMALES OF AUSTRALIAN SPECIES OF POLYNEMOIDEA

1. Ovipositor very long, scape asperate, basal tarsal segments much longer than any succeeding segments *varicornis* Girault
 Ovipositor not long, only slightly exerted, scape not asperate 2
2. Thorax with coarse, reticulate sculpturing, thorax entirely dark brown, ovipositor originating in middle of abdomen *domestica* Girault
 Thorax without coarse, reticulate sculpturing, thorax black and yellow, ovipositor originates at base of abdomen 3
3. Mandibles with three distinct teeth, mesoscutum and scutellum black, meta-thorax yellow, forecoxae dark, middle and hind coxae pale
 *particoxae* Girault
 Mandibles with two teeth and blunt truncation, mesoscutum black, scutellum and propodeum yellow, all coxae pale *lincolni* Girault

RECENT LITERATURE

A series of paperbacks dealing with environmental problems have been received from the publisher, Houghton Mifflin Company, Boston (no price information was included). The first three are collections of reprinted articles by many environmentalists including such well known ecologists and entomologists as: J. Ralph Audy, Barry Commoner, Paul R. Ehrlich, Frank E. Engler, and Eugene P. Odum. The fourth book deals with the DDT controversy.

ENVIRON/MENTAL. ESSAYS ON THE PLANET AS A HOME. Edited by Paul Shepard and Daniel McKinley. 308 p., illus., 1971.

The emphasis of this book is on the human overpopulation problem and its social and psychological effects on man. Each of the 20 reprinted articles is preceded by a brief introduction by the editors and concludes with a set of references. The book concludes with biographical notes on the authors and an extensive list of additional readings.

THE POLITICS OF NEGLECT: THE ENVIRONMENTAL CRISIS. Edited by Roy L. Meek and John A. Straayer. 256 p., 1971.

The 28 reprinted articles are arranged into six chapters considering problems from population to pollution. Each chapter is preceded by an introductory statement by the editors. Tables, footnotes, figures and references are omitted from the articles, but a terminal bibliography of general references is provided.